LAMPIRAN

A

```
#include <LiquidCrystal.h>
 LiquidCrystal lcd(8, 9, A2, A3, A4, A5);

#define DT A0
#define SCK A1

 long sample=0;
 float val=0;
 long count=0;
 char bacadata;
 char over;
 char pesan;

//Led
 int led=3;

//buzer
 int buzer=2;

//Arus roda maju
 int input1 = 5;
 int input3 = 7;
 int input5 = 11;
 int input7 = 13;
```

```
//Arus roda mundur
  int input2 = 4;
  int input4 = 6;
  int input6 = 10;
  int input8 = 12;

//pengaturan analog sensor berat
unsigned long readCount(void)
  {
    unsigned long Count;
    unsigned char i;

    digitalWrite(DT,HIGH);
    digitalWrite(SCK,LOW);
    Count=0;
    pinMode(DT, INPUT);
    while(digitalRead(DT));

      for (i=0;i<24;i++)
        {
          digitalWrite(SCK,HIGH);
          Count=Count<<1;
          digitalWrite(SCK,LOW);
```

```
        if(digitalRead(DT))
        Count++;
       }

   digitalWrite(SCK,HIGH);
   Count=Count^0x800000;
   digitalWrite(SCK,LOW);
   return(Count);
 }


void setup()
 {

   Serial.begin(9600);

   pinMode(input1, OUTPUT);

   pinMode(input2, OUTPUT);

   pinMode(input3, OUTPUT);

   pinMode(input4, OUTPUT);

   pinMode(input5, OUTPUT);
```

```
  pinMode(input6, OUTPUT);

  pinMode(input7, OUTPUT);

  pinMode(input8, OUTPUT);

  pinMode(led, OUTPUT);

  pinMode(buzer, OUTPUT);

  pinMode(SCK, OUTPUT);
  pinMode(DT, OUTPUT);

      lcd.begin(16, 2);
      lcd.print(" Alat Pengukur  ");
      lcd.setCursor(0,1);
      lcd.print("    Berat ");
      delay(1000);
      lcd.clear();
      calibrate();
}

// the loop routine runs over and over again forever:
```

```
void loop()
 {

switch(over)
  {
    reset();break;
  }

switch(bacadata)
 {
   case 'a' :maju();break;
   case 'b' :kiri();break;
   case 'c' :kanan();break;
   case 'd' :mundur();break;
   case 'g' :disconect();break;
   case 'f' :conect();break;
   default  :berhenti();break;
 }

if(Serial.available()>0)
 {
  bacadata=Serial.read();
 }
```

```
//pengaturan sensor berat
  count= readCount();
  int w=(((count-sample)/val)-2*((count-sample)/val));
  float hasiltimbangan = (w/1000.000);
  Serial.print(" ");
  Serial.print((float)hasiltimbangan);
  Serial.print(" KG ");
  Serial.print("|");



if(w>1000)
  {
    lcd.setCursor(0,0);
    lcd.print("Berat Melebihi");
    lcd.setCursor(0,1);
    lcd.print("Kapasitas!!   ");
    delay(100);
    Serial.print(" Overload ");
    Serial.print("|");
    delay(1000);

    if(w>1000)
     {
       reset();
       lcd.clear();
```

```
      lcd.setCursor(0,0);
      lcd.print("Pergerakan motor");
      lcd.setCursor(0,1);
      lcd.print("  Dc Ditunda!!");
      delay(10000);
      loop();
    }
 }

   else if(w<=1000)
    {
      lcd.setCursor(0,0);
      lcd.print("Berat          ");
      lcd.setCursor(0,1);
      lcd.print(hasiltimbangan);
      lcd.print(" KG           ");
    }
}

void conect()
 {
   digitalWrite(led, HIGH);
 }

void disconect()
```

```
 {
   digitalWrite(led, LOW);
   digitalWrite(input1, LOW);
   digitalWrite(input2, LOW);
   digitalWrite(input3, LOW);
   digitalWrite(input4, LOW);
   digitalWrite(input5, LOW);
   digitalWrite(input6, LOW);
   digitalWrite(input7, LOW);
   digitalWrite(input8, LOW);
 }

void maju()
 {
   digitalWrite(input1, HIGH);
   digitalWrite(input2, LOW);
   digitalWrite(input3, HIGH);
   digitalWrite(input4, LOW);
   digitalWrite(input5, HIGH);
   digitalWrite(input6, LOW);
   digitalWrite(input7, HIGH);
   digitalWrite(input8, LOW);
 }

void kanan()
```

```
  {
    digitalWrite(input1, LOW);
    digitalWrite(input2, LOW);
    digitalWrite(input3, HIGH);
    digitalWrite(input4, LOW);
    digitalWrite(input5, LOW);
    digitalWrite(input6, LOW);
    digitalWrite(input7, HIGH);
    digitalWrite(input8, LOW);
  }

void kiri()
  {
    digitalWrite(input1, HIGH);
    digitalWrite(input2, LOW);
    digitalWrite(input3, LOW);
    digitalWrite(input4, LOW);
    digitalWrite(input5, HIGH);
    digitalWrite(input6, LOW);
    digitalWrite(input7, LOW);
    digitalWrite(input8, LOW);
  }

void mundur()
  {
```

```
    digitalWrite(input1, LOW);
    digitalWrite(input2, HIGH);
    digitalWrite(input3, LOW);
    digitalWrite(input4, HIGH);
    digitalWrite(input5, LOW);
    digitalWrite(input6, HIGH);
    digitalWrite(input7, LOW);
    digitalWrite(input8, HIGH);
  }

void berhenti()
  {
    digitalWrite(input1, LOW);
    digitalWrite(input2, LOW);
    digitalWrite(input3, LOW);
    digitalWrite(input4, LOW);
    digitalWrite(input5, LOW);
    digitalWrite(input6, LOW);
    digitalWrite(input7, LOW);
    digitalWrite(input8, LOW);
  }

void reset()
  {
     digitalWrite(led, LOW);
```

```
    digitalWrite(buzer,HIGH);
    delay(100);
    digitalWrite(buzer,LOW);
    delay(200);
    digitalWrite(buzer,HIGH);
    delay(100);
    digitalWrite(buzer,LOW);
    delay(200);

    digitalWrite(input1, LOW);
    digitalWrite(input2, LOW);
    digitalWrite(input3, LOW);
    digitalWrite(input4, LOW);
    digitalWrite(input5, LOW);
    digitalWrite(input6, LOW);
    digitalWrite(input7, LOW);
    digitalWrite(input8, LOW);
  }

void calibrate()
  {
    lcd.clear();
    lcd.setCursor(0,0);
    lcd.print("Kalibrasi...");
    lcd.setCursor(0,1);
```

```
lcd.print("Tunggu...");


 for(int i=0;i<100;i++)
  {
    count=readCount();
    sample+=count;
    Serial.println(count);
  }

sample/=100;
Serial.print("Avg:");
Serial.println(sample);

lcd.clear();
lcd.setCursor(0,0);
lcd.print("Benda Siap");
lcd.setCursor(0,1);
lcd.print("Diukur!!");
count=0;

 while(count<1000)
  {
    count=readCount();
    count=sample-count;
    Serial.println(count);
```

```
      }


    lcd.clear();
    lcd.setCursor(0,0);
    lcd.print("Tunggu ");
    lcd.setCursor(0,1);
    lcd.print("Sebentar....");
    delay(2000);


     for(int i=0;i<100;i++)
      {
        count=readCount();
        val+=sample-count;
        Serial.println(sample-count);
      }


    val=val/100.0;
    val=val/100.0;
    lcd.clear();
}
```